DEPARTMENT OF PUBLIC HEALTH

By W. M. Dickie, *Director*

Departmental Reports.—Tuberculosis: The tuberculosis death rate has fallen from 127.7 per 100,000 population in 1925 to 106.3 in 1929. This is a reduction of almost 17 per cent. In 1906 the death rate for this disease was 235.7 per 100,000 population. The drop from this high rate to 106.3 per 100,000 in 1929 indicates the progress that has been made in tuberculosis control in California.

The Bureau of Tuberculosis of the State Department of Public Health has been active in raising the standards of care in county hospitals by means of the state subsidy to approved institutions, such funds being appropriated from the state treasury and allocated to the counties for expenditure.

Imported Tuberculosis: The problems related to the migration of tuberculosis cases in advanced stages to California, particularly to southern California, are very acute. This applies not only to migration from other states, but also to migration from Mexico. In 1928, 453 individuals, who had lived in California less than a year, died of tuberculosis, and 894 such deaths during that year occurred in individuals who had lived in California for periods varying from one to four years. About 20 per cent of all tuberculosis deaths in California are among Mexicans. Some of the counties of southern California are required to spend many thousands of dollars in the care and treatment of these foreign-born residents. If more satisfactory accomplishments in shutting off the tide of this immigration were made available, considerable might be accomplished in reducing the tuberculosis mortality rate of this state. It is doubtful if any other state in the Union makes such excellent efforts in the care and treatment of its indigent patients. This alone is an enormous factor in reducing the mortality rate. Continuation of this program will continue to lower the death rate of this disease still farther.

Water Supplies: The provision of adequate water supplies for large centers of population becomes more acute as the large cities grow with a speed that is nothing short of miraculous. Public water supplies in California are of the highest purity. Since surface streams are used largely, all public water supplies must be treated in order to make certain of their potability. The State Department of Public Health has stimulated activity among communities which draw their water supplies from surface sources. Not a single epidemic of water-borne typhoid has occurred within California since 1924.

Immunization Against the Infectious Diseases of Childhood.—The United States Public Health Service states that children should be vaccinated against smallpox before they are a year old. At this time they have not begun to run about and are in no danger of hitting the vaccination against hard objects or of getting dirt rubbed into it, and they are rendered immune practically from the start. On entering school they should be vaccinated again, for several reasons. In the first place, vaccination does not always protect for life; it requires reinforcement of the immunity in many individuals to make sure of protection against heavy exposures to smallpox. Fortunately, if the child already has an immunity, the new vaccination will not take. Instead, there will be merely a little red spot developing for only about a day, which is known as the "immune reaction."

We can now state also that diphtheria is an entirely preventable disease. Diphtheria antitoxin has enormously diminished the death rate among those attacked by the disease. It is an almost certain cure if given very early during the attack; but there occurs altogether too frequently some delay in its administration, so that its beneficial possibilities are not realized. This delay may be due to negligence on the part of parents or hesitation on the part of the doctor, but the child patient too often pays for it with his life. Antitoxin does not cure or prevent the condition of "carrier." "Carriers" are people who, without being sick themselves, carry about the germs of diphtheria in their throats or noses and innocently distribute them among persons with whom they come in contact. Consequently, something new was needed in the fight against diphtheria, great though the advance had been. This was found in the toxin-antitoxin mixture, evidence which suggests that it is capable of immunizing for many years those to whom it is administered, possibly for the remainder of their lives. The newer preparation known as diphtheria toxoid is probably even better. Neither of these preparations, however, can be relied upon absolutely to immunize everyone to whom it is given; and the administration of either of them should always be followed by a Schick test to find out whether immunity is complete or not. If not, additional injections should be given. It cannot be too strongly recommended to parents that they have their children immunized against diphtheria by this means. It is believed possible in this way not only to check the prevalence of diphtheria, but after a time absolutely to eradicate it. In fact, several American communities have already practically reached this goal after persistent efforts to get every child in the city immunized. Naturally, this should be done at an early age. While it is better to do it when or after the child enters school than not at all, the preschool age is the period during which the greatest danger from diphtheria occurs, and it is advised that the injections be given as soon after the age of six months as possible.

Besides the two diseases which have been discussed, smallpox and diphtheria, there are several others against which it is possible to immunize children, but for one reason or another, it is not advised that every child be so immunized. Scarlet fever, for example, is nowadays so mild among us that health authorities seldom find it necessary to recommend wholesale immunization against it. The chief value of scarlet fever immunization is in institutions where the disease, if introduced, would be likely to spread rapidly through the entire susceptible personnel unless they were protected.

In the case of measles, again it is not advised that the whole child population of a community be immunized; but, for example, if one child in a family has contracted measles, it is often possible to protect the remaining children by the administration of immune serum.

Typhoid fever is now so well guarded against in most of our cities that it would be wasteful and unnecessary for everyone to take the typhoid vaccine. Typhoid vaccination, however, is an excellent protection for persons who travel about much in places where the practice of sanitation is not well developed.

With regard to rabies, frequently referred to as hydrophobia, children who have been exposed to the bites of mad dogs should consult a doctor as to the advisability of having the Pasteur treatment administered.

Health officials are so convinced of the need for universal immunization against both smallpox and diphtheria that they are doing everything possible to make it easily available, and facilities are extended in most of the health offices for the immunization of those who for one reason or another do not consult a private physician for such services.